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THE EVOLUTION OF QUACKERY*

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CHAIRMAN FORREST: We are again grateful for the presence among us of the Editor of the *American Medical Association Journal*. I want to tell him something that he does not know, that we in Delaware have a medical society of which we are most proud. With the exception of the Massachusetts Medical Society, the oldest medical society in America is the Medical Society of Delaware.

Someone told me a few days ago that New Jersey did antedate us by a few weeks or months, but at any rate we are met in our one hundred forty-second session today and tomorrow. One hundred and forty-two years ago the Delaware State Medical Society was incorporated by a group of eighteen men in Delaware. Those men attained high positions in state and church locally and nationally. The man most active in organizing the Delaware State Medical Society was Dr. Edward Miller, who was the first secretary of the Medical Society.

I am quoting now almost verbatim from an article read by Dr. Louis Bush, who made medicine a great profession in Wilmington. A number of years ago he read this before the Academy of Medicine in New York and gave the particular facts. If you will permit me, I have the original copy of this article by Dr. Bush, and I am going to read to you his description of Dr. Miller. I want to give it verbatim, just one sentence, not in toto:

"In 1796 he removed to New York and there, in conjunction with Dr. Mitchell and Dr. Elihu Smith, he originated the *Medical Repository*, the first medical journal issued in the United States. This work everywhere bears the marks of his genius and cultivation by the brilliancy of his style, his lucid arguments, his originality and varied knowledge."

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Ladies and gentlemen, after my short session with Dr. Fishbein this afternoon, I could use the same sentences or language in introducing him to you. I have the extreme pleasure of presenting Dr. Fishbein.

DR. MORRIS FISHBEIN: Ladies and Gentlemen: I have had great difficulty since coming to Delaware to make up my mind as to the subject I should discuss this evening. After talking the matter over with your officers, I finally decided to talk on a subject that is easiest for me and which probably will be for you somewhat like Artemus Ward's famous kangaroo, "not only amusing, but also instructive." (Laughter)

It is always a great pleasure to be associated with Dr. Bloodgood on a program because in the course of our work together in the United States in our attempt to educate the public as to the facts of medicine, the importance of preventing disease and maintaining health, we have traveled about and talked in many places together. We have become almost as inseparable as some of the famous duos of history like Castor and Pollux, Damon and Pythias, ham and eggs, and Amos 'n' Andy.

Since the earliest times quackery has been an ever-shifting panorama of bizarre and strange pictures. Whenever a great discovery is made in medicine or science there is always some inspired quack ready to adopt that discovery for his personal gain. The average human being is not satisfied with the actual discoveries of science which are in themselves as great miracles as the world can ever know, but searches instead for some strange miracle which he cannot understand.

We all fear the unknown. The quack capitalizes on the human craving for miracles and offers something that is beyond all human accomplishment. One of our earliest students of psychology—P. T. Barnum—said that there was born in this country one sucker every minute. That was improved upon by Joseph Jastrow who said, "There is a sucker born every minute and a crook born every hour to take care of

sixty suckers." The ratio has existed since the beginning of time and is not likely to change in the future. Perhaps as I continue I may impinge on the personal beliefs and credulities of some of you. I always have in my audiences a certain number of Christian Scientists, osteopaths, chiroquactics (I mean "chiropractors"—that would be a Freudian error)—and similar workers on the borderlines of medical science. I have no doubt as I go along I will tread somewhat on their toes. If I do, I can only apologize with a little story. A young couple, just married, started on their honeymoon. It is not the kind of story that usually starts like that.

She said, "George, I have a confession to make to you. I'm a somnambulist."

He said, "That is all right, darling. You go to your church and I'll go to mine."

There are three things about which all human beings are credulous, money, matrimony, and medicine. In matters of money they have given a brilliant demonstration of their credulity during recent years. It has been said that Wall Street is now full of fruit peddlers and that a great many of the men selling lemons two years ago are selling apples now. (Laughter)

For matrimony, of course, the laws of Nevada have been made much easier than they used to be. But in medicine, health once lost is not easily regained and life once lost is never regained. I do not believe in raising from the dead.

There are quacks, of course, not only in medicine but also in every other field of human activity. There are quacks in the law and in the ministry. You all know the type of charlatan who gets his converts more by perspiration than by inspiration, who pounds on the altar and calls upon all the gods of the kingdom of swat rather than of the kingdom of what.

No doubt occasionally the quack starts out self-deluded. He actually believes he has something of great importance for the saving of the human race. Sooner or later he finds he has not the powers he claimed to possess and then he goes along consciously deluding, knowing that he is deceiving the people who follow him. He finds himself in a blind alley from which it is impossible for him to depart, even should he wish to do so. I find no record of any successful charlatan who ever voluntarily gave up his quackery and entered on an honest mode of human existence.

The quack is marked by certain traits of personality and appearance. He is likely to have long flowing hair and great power of suggestion, to be a man with a suave and easy manner, a man of the Wallingford type. If a woman, she is usually of handsome and striking appearance. In either case the person always has a great deal of the thing that is called "it" in Hollywood, and not only "it," but also "those." Following the name of the charlatan are the alphabetical appendages, a long list of letters indicating degrees of erudition that have never been conferred upon him by any universities.

One of the greatest charlatans of whom I have any information was in Los Angeles. He is named George Starr Wright, and he has after his name enough letters to make a good crossword puzzle for the evening paper. He is a member of everything, and in most of them he is an officer. Most of the societies are societies which he created in order that he might be made an officer and get these letters. Then the society disappeared. His chief form of quackery is a form known as bio-dynamo rhythmochrome therapy. The patients sit on a chair facing east by west and stripped to the waist. Colored lights are thrown on the abdomen. The professor studies the colors while the patient breathes deeply and wishes for what he wants. That is where the rhythmochrome comes in, "chrome" for color and "rhythmo" for the deep rhythmical breathing. Sometimes the patient gets what he wishes for, but mostly the professor gets what he has scheduled for himself.

The people who follow quacks are not always the most ignorant people in the community. One finds them among bankers, brokers, millionaires, among authors, and poets, and journalists, frequently among leaders because, being leaders in industry or in some allied field, they feel that they are quite capable of choosing for themselves in the field of science, notwithstanding the fact that they were never educated in science. In fact, one finds addicts of charlatanism in every group, and probably more addicts among the group known as the intelligentsia than among any other. The intelligentsia have been described as those educated beyond their intellect.

Quackery and faith healing began with the

Indians and savages dancing around fires in the moonlight shouting and shrieking and singing and praying to higher powers to help them, to heal them of disease. It begins with the belief in spirits, that all disease represents a spiritual inhabitant of the body and that an evil spirit. The ancients trephined the skull in cases of migraine or in cases of epilepsy, the falling sickness, in order to let the evil spirit out. They took a gimlet and made a hole in the skull and took out a little button of bone to let the evil spirit out of the body. Sometimes life went out simultaneously and the patient was cured permanently of everything. Here is a demonstration of blind belief, in the absence of accurate knowledge.

The difference between those people and you sitting here is what made Charles Richet, the French philosopher, hail the human being as "homo stultissimus," or "idiot man," because, having information available, he does not use that information for his own benefit. One could not expect the anthropoid ape, probably as near to mankind as one can get in the animal species, to avail itself of smallpox vaccination, or of periodic physical examination in order to find out whether or not it has cancer.

The ape has not the reasoning power of man. But the human being, who is supposed to have reasoning power and who reasons wrongly or who is unwilling to avail himself of the knowledge that science has provided, is truly what Richet called "homo stultissimus," or idiot man.

We pass from the time of the ancients to the Greeks, who established through their powers of observation the natural history of disease. Hippocrates assembled the Hippocratic Texts, giving case reports of disease, so accurately described that it is possible for a good modern physician to read the case reports and make a diagnosis in the light of modern knowledge.

Following Hippocrates came Galen, Celsus, and many other leaders. Then come eight hundred years known as the dark ages of medical science, in which men were more concerned with their souls than their bodies, not realizing that a healthful soul can exist only in a healthful body. Then comes the medieval period when men began again to dissect human bodies. Here we have Vesalius, Michael Servetus, Eustachio, Fallopius, Girolamo Fracastoro, and Leonardo da Vinci, persecuted by the deep spiritual believers of that time because it was considered evil, heresy, or profanation to dissect a human body to find out the way it worked, to prevent pain and disease. We come gradually to the beginnings of our modern times, the beginning of an actual science of medicine with the discovery of the circulation of the blood by William Harvey, and many more discoveries, such as auscultation by Laennec, and percussion, by Auenbrugger—all finding out actual facts about the human body in health and disease and creating our modern knowledge of scientific medicine.

But parallel to every discovery are the charlatans, endeavoring to adapt these discoveries to the control of disease by some special method or power which they claim to possess and which actually they do not possess.

Thus the Leyden jar was discovered in Holland. Benjamin Franklin flew a kite and drew lightning from the skies and we learned there was such a thing as electricity, positive and negative. There appeared in London a man named John Graham, who called himself, Servant of the Lord, O. W. L. That "O. W. L." had nothing to do with a similar designation to indicate during the war that a soldier had business in Paris. It meant "Oh, Wonderful Love," a phrase reminiscent of one of the modern faith-healing cults which has the idea of religion intimately bound up with the idea of healing. I shall trace for you the evolution of this religion. John Graham, Servant of the Lord, O. W. L., had a Temple of Health in London. He put on the outside a statue of Hygeia, and inside he put a statue of Venus. One could see Hygeia for nothing, but it cost two shillings to get in to see Venus. There one bought a bottle of Elixir of Life for an additional two shillings. Graham had a celestial bed. For sterility a couple could sleep in the celestial bed one night for two hundred pounds. It was wired with electric batteries and wires; soft music played; there were beautiful velour hangings; perfume was sprayed here and there; colored lights were thrown upon the bed, and a pleasant time was had by all.

Next, in Paris, appears Franz Anton Mesmer, who came from Leipzig. He could play well on the piano and the harmonica. He was handsome and attracted tremendous numbers of women. He built a Temple of Magnetic Healing.

His patients sat in concentric circles, as in a modern Spiritualist meeting. In a vat at the center were bottles filled with iron filings and out of each bottle came an iron rod. The patients held these rods and Mesmer would point another iron rod at the patient and say that the disease in the patient's body was coming out through the iron rod by the power of magnetism. He told the people to concentrate on whatever they wished, success in love or in business, and they would have it.

So powerful was the power of suggestion that many of the women who attended the clinic were thrown into fits. It became necessary to build a small hall, known as the Salle de Crise, the Hall of Fits, to which the ladies were dragged and there allowed to lie until they would recover their equilibrium and be taken back and given more of the same treatment.

Mesmer soon found it was possible by causing the patient to fix his attention on the iron rod to throw the patients into a trance-like state which became known as the mesmeric state. Out of this Charcot developed his idea of hypnotism, the hypnoidal, and finally the hypnotic state itself.

About this time also appears the first popular medicine, Bishop Berkeley's tar water. He slept one night and developed a colic, a thing which could easily happen to a Bishop in those days, for they were heavy eaters and hearty drinkers. When he got colic, he got up and drank some tar water and got well of the colic. That may have been just sequence and not cause and effect.

But he got rid of the colic and he wrote a two-volume essay on the advantages of tar water in the treatment of disease. Thus developed the first panacea after the terrible mixtures of an earlier day.

Then there was in London at that time a woman, who was the logical great-grandmother of the osteopaths and chiropractors. Mrs. Mapp was the first great bonesetter. She claimed to have great ability in pulling legs and arms here and there. She had a great following, but, unfortunately, she pulled one fellow in such a way that he didn't get over it. Thereafter her vogue declined very rapidly. You will find her and Bishop Berkeley and John Graham fully described in a book by C. J. S. Thompson, called "The Quacks of Old London." They are the antecedents of most of our American quacks.

Now we come to an American quack, Elisha Perkins. Benjamin Franklin had flown the kite and brought down lightning from the skies. The Leyden jar had been discovered in Holland. Mesmer had established his temple of magnetism, in Paris, and the Temple of Health was built in London by Graham. Elisha Perkins said all disease was electrical phenomena. He drew the electricity out of the body with two electrodes, one an amalgam of zinc and one of copper. The patient drew them downward one in each hand, over his body. Perkins cautioned people against drawing them up because that would intensify the disease. These tractors cost about twenty-five cents a set to manufacture and they were sold at five dollars. Perkins promoted them by the use of the testimonial, which has been the basis of the patent medicine industry and which is the chief reliance in modern advertising. Perkins got testimonials from the Governor of Pennsylvania, from several Senators and Congressmen—that is not particularly difficult even in modern times.

Not long ago a firm wrote to the American Medical Association, thinking we were in the business of manufacturing cosmetics, and offered to sell us the testimonials of various movie actors and actresses for any cosmetic we were going to manufacture. The rates were figured out according to popularity. I think it was something like John Gilbert, a thousand, Gloria Swanson, twelve hundred, Lon Chaney, two dollars and fifty cents, and so on down the line, according to the value of the testimonial for cosmetic purposes.

Today testimonials are still bought and sold in the open market. One can buy his testimonials in bales of five thousand for fifty dollars a bale, and write in the disease and its cure with a particular preparation.

Of course, in the higher ranks, testimonials cost a great deal more. Alice Roosevelt Longworth was reported to have received five thousand dollars from Ponds Extract Cream, and the Queen of Romania, fifteen thousand dollars. A look at Alice and at the Queen, may explain the difference.

Then there is Fleischmann's Yeast. Yeast is a mildly laxative substance, rich in Vitamin B,

and it has been enriched by adding Vitamin D, but it is not a panacea for all disease and will not cure anything to which the human flesh is heir. Certainly will not take a weakling and turn him into a Primo Carnera. Still the testimonials indicate that it may do so.

Now Fleischmann's present the pictures of bearded savants looking through microscopes, and testifying that yeast will certainly do things for the benefit of health. The picture of the pompous-looking scientist sells the idea of science and authority. Actually every one of these foreign physicians was inveigled into making a statement by a donation to his favorite charity.

In the headquarters of the American Medical Association we have received letters from at least five of them protesting that these statements were obtained under a misapprehension and by misrepresentation.

Elisha Perkins offered to have a set of tractors put in the home of George Washington, who was dying of angina, but it is not reported that he tried Elisha Perkins' tractors.

Elisha had a son named Benjamin. He took these tractors to England and promoted them there and did well with them. It occurred to two British physicians to give them a trial. They took them to a clinic and they had a set of wooden tractors made to look exactly like the metal tractors, and, of course, wooden tractors would not conduct electricity. They treated every other patient with the wooden tractors and just as many got well with the wooden tractors as with the metallic tractors. That is what we know as the controlled experiment. When the fact was made known, the tractors began to disappear from the scene, so that within a period of less than fifteen years tractoration, or Perkinsism, as a system of treating disease, had disappeared entirely.

The story applies to most forms of quackery. As soon as the background is made known and the public is enlightened as to the lack of any scientific basis, the quackery begins to disappear.

Shortly after the beginning of the Nineteenth Century, which was the time of Elisha Perkins, the United States began to go through a great religious revival. Girls were kept secluded in the home and didn't get about much. They had little fresh air, sunshine, and exercise. There was a good deal of nervousness and hysteria. Chlorosis, or the green-sickness, was common among young girls. Some fifteen to twenty religious healing cults developed, including Spiritualism, Shakerism, New Thought, Mesmerism, the Fire Baptised Holiness Association, the Holy Rollers, the Magnetic Healers, the esoteric vibrationists, the psychic scientists, the Dunkers, and the Holy Jumpers, and the Muygletonians, the Seventh Day Adventists, the Seventh Day Baptists, and similar organizations. All these people had strange ideas of religion, almost all of them have associated with the strange notions as to diet and healing. There are three things which are the chief interests of man on this world. The three things are the spiritual conception, that is, what spiritual power controls life on this earth; secondly, the idea of love or marriage or sex; and, finally, the idea of hunger or food or appetite. These three needs of man must be satisfied to make a happy individual on this world. He must have food to eat. He must have his sex interest properly taken care of through proper relief of the biologic urges, and he must have his spiritual need satisfied through some belief regardless of whether it is in a higher power, a belief in science, or whatnot.

An example of cultism in diet is vegetarianism. Practically all of the early religious healing cults had vegetarianism as an associated practice. New Thought founded by John Humphrey Noyes included it. The human stomach is adapted to an omnivorous diet. It can employ some of all of the food substances available and, provided one does not overeat of any one thing or another, one can get along fairly well. In fact, one must eat certain forms of meat nowadays if one happens to have certain incurable diseases, in order to be relieved of them. One must eat liver or liver extract to control pernicious anemia, and if one is diabetic, insulin, from the pancreas of the animal, preserves life.

The "anti" is usually anti everything scientific. A friend of mine sat in a restaurant opposite one of these peculiar people, an anti-vivisectionist and an anti-vaccinationist. Whenever anyone is addicted to some strange belief, he wants to convince everybody else. He is not satisfied to be by himself with his notion. A cold bath fanatic boasts, "I take a cold bath every morn-

ing," then rushes in and opens the windows and you have to freeze because he takes a cold bath every morning. This anti sat opposite my friend, who had ordered a tenderloin steak, and chewed away at his lettuce. Finally the anti said in an accusing tone of voice, "I never eat meat."

And my friend said, "Well, brother, you're going to throw a fit when I tell you you just chewed up a caterpillar with that lettuce you are working on."

At the period referred to other strange notions came into the United States. There was phrenology, brought into the United States about that time, by a pupil of the famous Gaul. The idea was that you could tell from the bumps on a person's head his particular aptitudes in life and the diseases from which he was going to suffer. They had worked out the idea by testing it on various people. They took a Scotch cashier in a bank and they said "Now that is the bump of acquisitiveness," and they located various other typical bumps. Important people fell for that idea. Horace Greeley was a firm addict of phrenology. John Brown and Julia Ward Howe believed in it. All these people actually gave testimonials to phrenology.

About this time there was born in New England, in this atmosphere of hysteria and folly and excitement, in 1821, in New Hampshire, a girl, whose parents named her Mary Morse Baker. She later became Mary Morse Baker Glover Patterson Eddy. As a child, she was hysterical, she used to develop tantrums and throw herself on the floor and scream. Doctors used to come and inject her with morphine. That made her worse, because some people get more excited with small doses of morphine. She grew up and she was difficult to handle. Her brother introduced her to a man named George Washington Glover. She married George Washington Glover, and early in their married life she began to develop strange notions. She got the idea she was a child and had to be rocked to sleep. He rocked her to sleep for a while, but it proved a little heavy for him and he had a lady-sized cradle made for her and rocked her to sleep in that. Then he died suddenly of yellow fever and was at peace. Now came a period of three months in which she had difficulties. A posthumous child was born and she farmed it out and lived about with various relatives and friends. Eventually she married Dr. Patterson, a combination homeopath-dentist. They lived a most unhappy life, moving into six towns in five years. The Civil War broke out and, perhaps in search of peace, he went to the war. While in the war he was captured and confined in Libby Prison. About this time Mrs. Mary Morse Baker Glover Patterson located in Lynn, Massachusetts. In Lynn, Massachusetts, at that very same time there was growing up the second most remarkable woman in the history of America, a woman whose name will be familiar to all of you, Lydia Pinkham. One time Mrs. Patterson was walking in winter and she slipped and fell and injured her spine and she was unable to get around much thereafter. She had to lie in bed and be waited on. Patterson came home from the war and he heard that there was at this time up in Portland, Maine, a famous magnetic healer, a man named Phineas Parkhurst Quimby. To trace our evolution of quackery let us now revert to Mesmer. Charles Poyen, a pupil of Mesmer, came to this country and was seen by Quimby. Quimby tried mesmerism and then developed a technique which is the antecedent of our modern manipulative methods. He rubbed the middle of the patient's abdomen with the right hand and the top of the head with the left hand, and suggested that pain was being relieved. Finally he found out it wasn't necessary to lay hands on the patient at all, but that suggestion alone caused disease to disappear. He was thus the first great mind healer. Patterson took his wife to Quimby, and though she had not been able to walk for a long time, or at least said she couldn't, Quimby completely cured her in two treatments and she climbed to the top of the city hall steps to prove it. She wrote love sonnets and gave all sorts of praise to Quimby. Then she returned to Lynn and set up a great school of healing in Lynn, healing by mind science. Combining it with a spiritual motive, she developed what is now known as Christian Science.

If you want to read about her, there is now available a great deal of honest literature that you can buy in any book store. Five years ago you couldn't buy it in any book store. You can buy it now because the great censorship manipulated by the Christian Science group

through advertising and business control has broken down. Anyone can read the book by Dakin, on the Life of Mary Baker Eddy, or the one by Cornela Springer, or any one of a dozen books giving the actual history of this remarkable woman. Horatio Dresser's book, "The Quimby Manuscript," provides the Quimby text and on the opposite side the text of the first edition of "Science and Health." There you can see how the book called "Science and Health" was taken directly from Quimby's ideas on mind healing.

There has always been mind healing. There has been healing within the established church since the beginning of the established churches. Mind healing through all sorts of signs and magical omens and tokens and formulas of one type or another will always exist simply because it is now well recognized that there are diseases of the mind as well as diseases of the body. When a person becomes convinced in his own mind that he cannot walk or cannot talk or cannot eat, he will not walk, talk, or eat until he is unconvinced. He is just as likely to be unconvinced by having it explained to him and understanding why it is he cannot walk, talk, or eat, as he is likely to be unconvinced by pushing a tube down his throat or throwing over him a bucket of ice-cold water, which used to be the system of curing hysterical persons some seventy-five years ago. This was known as the bucket treatment. When a young lady became hysterical, the old doctor would come and look her over. Then he would go out and put the bucket under the pump and fill it and then sneak up to the bed and suddenly overturn the bucket on the young lady. Immediately she would be cured and would arise and begin to wash dishes again.

Eight years ago in Hamilton, Ontario, there was a girl in bed who had not walked for many months. She convinced everybody and herself that she could not walk. Finally a physician examined her. He found her nervous tissue organically intact. Her limbs were movable, whereas a limb that is paralyzed, as a limb of a patient with infantile paralysis, or meningitis, or a broken arm in a cast, becomes fixed and will be not freely movable. The muscles were in good order, and not wasted as occurs in disease. He persuaded her and she was again able to walk. This was not a miracle, but a scientific diagnosis of a hysterical paralysis and a cure of that by the power of suggestion. That type of mind healing goes on constantly. It is moreover the type that underlies the manipulative cults and all forms of cultist treatment, based on one idea as to the cause of all disease and one idea as to the method of treatment.

Here in Delaware your Governor of Delaware in vetoing a chiropractic bill, did a service to scientific medicine throughout the world. By the honesty and straightforwardness of his action, Governor Buck made the name of Delaware known throughout the world wherever science is known and understood. He realized the complete lack of scientific background behind this cult which employs the power of suggestion and reinforces it by the laying on of hands. Any of you who know your Bible know that the laying on of hands served to cure people who suffered from mind disease in Biblical times, long before there was any science.

Right after the Civil War, Dr. Andrew Still was traveling in Kansas. Coming upon some fragments of bones of the spine and skull and he developed the idea that all disease was formed by pressure of the bones of the spine on the nerves coming between the holes in the bones. He was the father of osteopathy, that is, the osteopathy of then, which is the chiropractic of today.

He tried to put the idea over in Lawrence, Kansas, then went to Macon, Missouri, and failing there located himself in Kirksville, Missouri. He established a school, and said that anybody who had the Divine call should come to Kirksville and learn the wonderful method of healing. He said they did not have to be able to read or write. All they had to do was have the Divine call. Then they could come to Kirksville and learn how to push the bones of the spine and get them off the little nerves. The boys not doing so very well came out of the farms and from the barber shops and the blacksmith shops to become doctors and enter medicine by the back door.

The time was just when Pasteur discovered the germ causation of disease. Pharmacology, histology, pathology, neurology, psychology, physics, chemistry—all of these sciences came into the medical curriculum. Modern scientific medicine is based on all of these sciences. For

this reason there are being introduced today in many of the United States what are known as basic science bills. Under these laws if a man wants to practice medicine, he must have knowledge of all of these basic sciences. There should be a minimum standard of education for all who propose to heal the sick. Having that minimum standard of education, it is found that physicians do not attempt to heal the sick by any one-track method. They learn that disease is not caused by any one thing and cannot be cured by any one thing.

Scientific medicine has gradually enlarged its curriculum so that it includes as a minimum two years of college, four of medical school, one or two years of interneship, and two or three years assistanceship to a well-known man in a specialty if one wants to be a specialist. That is the difference between scientific medicine and various roads which are back doors into the practice of medicine. It is well established that once a man gets into the healing business, regardless of the route by which he enters, he soon begins to find that his one-track system will not succeed and he begins to reach out for other things. Osteopaths were in the majority of those who took up the Abrams' cult. In some states they prescribe narcotics and even liquor, even if they don't believe in drugs in the healing of disease. They become essentially low-grade doctors. One osteopath found that the tonsils are near the surface and can be reached by anyone with a hook. He announced himself an expert in the removal of tonsils. Another discovered that obstetrics had been going on for many years and decided he could sit around and wait as good as the next man. He became an obstetrician. Gradually these things were added to osteopathy.

Today the osteopath says it isn't just the bones of the spine pressing on the nerves. It is the adjustment of all of the tissues of the body, bones, arteries, nerves, blood vessels, so everything will be in harmonious relationship. The osteopathic curriculum has been lengthened to include at least a high school education, and four years of osteopathic education. Since the depression it is getting a little difficult for some of the boys to get a high school education and in the schools of osteopathy there is beginning to be a little lowering of the requirement of a high school education. If the depression continues, they may get back to the time when they needn't read and write.

Out of osteopathy, which is a method of getting into medicine by the back door, came another cult. If osteopathy is getting in by the back door, chiropractic is coming in through the basement. That was developed by D. D. Palmer, of Davenport, Iowa.

D. D. Palmer was a magnetic healer. The first magnetic healer was Mesmer and then there was John Graham, and Poyen, and Phineas Parkhurst Quimby. In Davenport, Iowa, was D. D. Palmer. He traveled around with a wagon. In Kirksville he saw what Dr. Still was doing. Then he went back to Davenport, Iowa. In the building where he had his office was a colored boy, Harvey Lillard, who had not heard for many years. He put him on a table and put his knee in the middle of Harvey's back. He pushed and Harvey heard immediately. It is not said what he heard.

Deafness is of various degrees, as many of you know who have deaf people in your family. You can say, "Run to the corner and bring a bottle of milk," and they won't hear it, but let them be three rooms away and make a slightly deprecatory remark and they come in and say, "What did you say?" A little extra intensity on the sense of hearing will help out.

You have read about people who were cured by being taken up in airplanes to cure their deafness. They take them up eight, nine, or ten thousand feet and drop them six thousand, then straighten out the plane. The fellow gets out and says, "I can hear perfectly." Of course, he would rather hear perfectly than repeat the experience. The sad part is that in the past ten years since that idea was first brought to light, unquestionably a considerable number of children (I believe the newspaper clippings I have show that the number of children is greater than the number of adults) have been killed by being taken up and dropped in airplanes. The pilot gets killed, too, sometimes. These children had deafness due to congenital syphilis or to some other congenital disease which completely destroyed their hearing. Such deafness is not cured by suggestions, either enforced by airplane flights or in any other way.

There were two soldiers during the war who

were in a trench together and the guns were going off, masses of earth were flying here and there, shot and shell heavy all around. One said, turning to the other, "Scare me, Al! I got the hiccoughs." (Laughter). That also is the power of suggestion.

The charlatan reinforces the power of the mind over diseases that are not organic. They never actually learn the diagnosis of disease, so they go about trying to cure tuberculosis in its early stages and cancer in its early stages, trying to cure disease after disease in which the patient can be saved if he has a proper diagnosis in the early stages of the disease. Unfortunately such cases are hopeless if allowed to run five months or six months or a year. Time after time physicians see patients with incurable cases of cancer and tuberculosis and all of the other diseases, who have trifled away their time seeking to have these organic diseases removed by pushing a button in the back, by colored lights, pulling the leg, or reading stories out of a prayer book.

Chiropractic has been a conspicuous example of such methods. You should not be troubled with it because your Governor saw fit to veto the chiropractic bill, but unfortunately you are troubled with it because the state does not appropriate enough money to give the proper officials the power and influence to go out and prevent charlatans from practicing outside the law. There is not enough money appropriated by the state to permit proper prosecution of illegal practitioners.

Once there were six thousand pupils in Davenport, Iowa; now the school has dwindled until it includes less than three hundred. Some of the greatest discoveries in medicine have been made within the past twenty-five years. Wherever a new discovery is made, there is always the quack ready to grab the discovery and exploit it for his personal gain.

Dr. Bloodgood mentioned the use of radium in the treatment of cancer. Today the limitations of radium and its actual value in the treatment of cancer are fairly well established. It is well known and as a most valuable method in the treatment of certain forms of cancer. Radium in itself is a valuable element. If one wants to use it, it is a costly process. There are, however, in the United States immense numbers of charlatans without any radium whatever, or merely the semblance of some radium, who are putting over the idea to the public that they have it and that it will cure not only cancer, but also all other diseases. The public, knowing nothing actually about radium, is willing to spend its money for this semblance of radium, for this fallacy. So there are radium packs and radium lights, radium belts and radium pads, radium seeds and radium blankets, and even radium drinking water to pour into your system with the idea that it will wash away your rheumatism from the inside. There are all sorts of things without any scientific basis, promoted merely because the word "radium" has become recognized as an element of the greatest potency.

And then the vitamins!

The average man knows the vitamins represent a lot of letters which are magical elements. Through our knowledge of vitamins rickets is gradually being entirely removed and pellagra is being overcome, and scurvy and beriberi, and poliomyelitis, and conditions of that sort are being brought under control. However, all sorts of quacks are exploiting all sorts of strange mixtures of vitamins. You are told you must eat a lot of this or of that to have perfect health. Eating a lot of Vitamin A won't give you perfect health, and if you eat A, B, C, and D, they won't necessarily give you perfect health. There are other properties in foods to be considered—proteins, and fats, and carbohydrates, and mineral salts. There are the questions of bulk and alkalinity or acidity. There is much scientific knowledge to be applied, and food can not be selected with just one idea.

Then we have the marvelous effects of ultra-violet rays, particularly in rickets. As a result of that knowledge hundreds of people are exploiting lamps that are not even ultra-violet lamps, for the cure of disease. There are barber shops where bald-headed barbers wave purple incandescent lamps over bald-headed patrons to grow hair on them. They tell them that is the real ultra-violet. Real ultra-violet rays cannot be seen and do not look violet. The ultra-violet rays are invisible rays. People should know these things. It is elementary education.

What the people of this country need more and more today to protect them against quackery and prolong their lives by overcoming de-

generative diseases, and high blood pressure, and Bright's disease, and disease of the heart, cancer, and tuberculosis, and venereal disease, is elementary education concerning the human body and its functions in health and in disease. The time has passed when in our schools we must emphasize reading and writing and arithmetic, and the fact that the exports of Sardinia are sardines, or are not sardines, whichever it happens to be, and facts of similar importance. What children should learn is what and how their bodies are composed, what represent the earliest signs of disease, the fact that they should have a periodic physical examination. They should know the necessities for body building and health. When the people learn to get this sort of information from authoritative sources, we will have a happier and a better country.

ARTHRITIS OF THE SPINE WITH SPECIAL REFERENCE TO THE CHRONIC TYPE*

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Spondylitis, a disease entity characterized by pain and stiffness of the vertebral column with or without deformity, has of recent years been the subject of a great deal of comment by orthopedists and medical men in general. Its prevalence, chronicity and varying symptomatology, together with the social and economic importance of its alarming sequelae, have been evidenced by the interest expressed in medical literature throughout the past half-century. Efforts to combat the inroads of this distressing condition have led to the establishing of numerous etiological factors, various types of pathology, and manifold classifications based on clinical or morbid anatomical observations. But the treatment has been conservative and perfunctory. The disease has been allowed to proceed to the late stage of deformity, which is not only incapacitating to the patient, but often decidedly painful and difficult to endure.

The spine should be included in every routine physical examination. In making an examination of the spine one must bear in mind the fact that there are normally seven cervical, twelve dorsal, and five lumbar vertebral bodies. The normal physiologic curves are entirely in the anterior-posterior plane. There is a lordosis, or anterior convexity, of the cervical spine; a kyphosis, or posterior convexity, of the dorsal spine; a lordosis of the lumbar spine; and a kyphosis of the sacrum and coccyx. A lateral deviation or rotation of the spine is known as scoliosis.

Many pathologic conditions manifest symptoms referable to the periphery. This further emphasizes the importance of a careful inspection of the posterior aspect of the body trunk.

The degree of passive and active motions in the spine depends upon the age of the patient and the pathology present.

The condition of chronic arthritis of the spine or spondylitis deformans has been known to medical science for many many years. Skeletons recently unearthed in archeological expeditions have borne mute evidence that spondylitis was a disease factor existing prior to the advent of homo sapiens. The condition was prevalent among the Romans and Greeks, and its unmistakable signs have been observed in Egyptian mummies.

Despite the long-standing history and frequent incidence of the disease, and although there had been much in the literature concerning spinal deformities and general osteoarthritis, it was not until 1844 that the condition of arthritis of the spine per se was described by C. G. A. Aldenhoven. In 1884, Strümpell reported a case of ankylosis of the spine, together with arthritis of the hips and shoulders.

The disease was, however, relegated to a role of relative unimportance until 1893, when von Bechterew published his classical description of the clinical syndrome now bearing his name. He described a specific type of spondylitis with the following characteristics: (*a*) a disease occurring primarily in the spine; (*b*) history of trauma; (*c*) sudden onset; (*d*) pain, diminished sensibility; (*e*) hips and shoulders involved to minor degree, if at all; (*f*) limited kyphosis and ankylosis, usually localized in the upper spine.

Pierre Marie, in 1898, enlarging on Strümpell's earlier observation, described in detail another variety of spondylitis which he appropriately designated as spondylose rhizomelique, a spondy-

*Read before the New Castle County Medical Society, Wilmington, March 15, 1932.

litis also involving the roots of the extremities. It is manifested by: (*a*) an arthritis beginning in the hips or lumbar spine and ascending to involve the shoulders; (*b*) not accompanied by paresthesia or hypesthesia in the trunk or extremities; (*c*) pain is limited to the spine and hip and shoulder joints; (*d*) no involvement of the smaller joints; (*e*) usually infectious in origin.

PATHOLOGY AND ETIOLOGY

As in every other type of disease, the pathological changes in spondylitis vary in degree in proportion to the severity of the etiological factor, the time elapsed before corrective measures are begun, and the efficiency of the treatment instituted. Barring the possibility of a severe infectious arthritis as part of a generalized arthritis deformans, the progress of this disease and the chance for its successful arrest will depend upon the time it has existed before being seen and treated by the physician. When recognized early, eradication of the cause and supportive treatment will tend to prevent any further advance in the disease. However, since most of these cases are permitted to progress to the stage of rigidity and deformity, it is with this condition in mind that I describe the characteristics of the advanced pathology.

The question of spondylitis, as of arthritis in general, has always been an inco-ordinated jumble of observations, with confusing terminology, and an inconsistency characteristic of the disease itself. Knaggs suggested the following classifications:

1. Spondylitis Ossificans Ligamentosa.
   (*a*) An atrophic arthritis beginning in the vertebral ligaments, which later ossify and cause ankylosis:
   (*b*) Begins in lumbar spine and progresses upward.
   (*c*) Lipping of the articular surfaces.
   (*d*) Thinning of the discs.
   (*e*) Infectious in origin.
   (*f*) The Marie Strümpell type.
   (*g*) Xray changes are late, and consist of ligamentous ossification, parrot-breaking of articular surfaces, roughening, and finally ankylosis.
   (*h*) Usually in young adult life.
2. Spondylitis Muscularis.
   (*a*) An hereditary factor.
   (*b*) Usually a history of trauma.
   (*c*) Weakness of the spinal muscles causing kyphotis, which produces atrophy of the discs and finally ankylosis.
   (*d*) Usually not infectious.
   (*e*) The von Bechterew type.
   (*f*) Xray changes same as Type 1 except for ligamentous ossification, which is absent.
   (*g*) May occur at any age.
3. Spondylitis Osteoarthritica.
   (*a*) The hypertrophic or degenerative type.
   (*b*) Degeneration of cartilage and overgrowth of bony tissue.
   (*c*) Some degree of ankylosis but true bony union is rare, although eburnation in the spine is unusual, due to the small amount of motion between the vertebrae.
   (*d*) Often present, and visible to the xray as hypertrophy of the articulating surfaces and exostoses before onset of symptoms.
   (*e*) Usually in middle-aged and elderly persons.

The term "spondylitis deformans" may be applied to any one of these groups in which cases have advanced to the stage of deformity. It presents no specific pathological picture, and it must be realized that there is no hard and fast rule as to etiology of the various types just as there is no absolute method of classification. Thus, cases of Type 2 may be caused by infection, and those of Type 1 may be due to metabolic disturbances. In like manner, patients having a clinical picture resembling spondylitis ossificans ligamentosa may show some of the characteristics of spondylitis muscularis.

In addition to these causes, there are diseases of the vertebrae themselves accompanied by rigidity and kyphosis, but not coming under the head of arthritis. These include (*a*) tuberculosis; (*b*) rickets; (*c*) Kümmel's disease, a traumatic rarefying osteitis; (*d*) malignancy; (*e*) osteochondritis; (*f*) osteitis deformans.

TREATMENT

In the early stages of the disease, deformity may be prevented or arrested by the ordinary measures of (1) baking, (2) massage, (3) extension exercises, and the use of (4) a spinal brace, (5) corset, or (6) plaster jacket. Bed treatment on (7) a frame or (8) fracture boards with (9) hyperextension roll is undoubtedly of value in some cases. (10) Eradication of any focus of infection is, of course, a primary consideration. (11) Electrotherapy with diathermy, galvanic or sinusoidal current has been used to some advantage. After the onset of the stage of deformity, however, relief has not been so readily obtained.

Special forms of treatment, not so popularly known, have been presented in the literature. (12) Foreign protein therapy has resulted in some improvement and is recommended by Stockman. The use of (13) xray therapy has been strongly advised by O'Bannon, who states that pain is markedly relieved even though deformity persists. The use of (14) Small's SCA antigen

has met with little success in this particular type of deforming arthritis. Various operative measures have been attempted in order to relieve the disability which accompanies the spinal and hip deformity. Peugniez reported a case of ankylosis of the spine and hips on which (15) subtrochanteric osteotomies were performed with the function of false joints. He claimed that the operation produced a comparatively useful patient who was able to walk about and sit in a chair, this being previously impossible.

Most men have been strongly opposed to any form of radical treatment, either surgical or manipulative. Jones, Goldthwait, Deschmann, and Frazier have all warned against forceful manipulation of the spine or hips and have decried resections of the hip or any form of plastic work. Nevertheless, I have been of the opinion, and this has been supported by results, that in certain types of cases (16) manipulative measures are of great value in correcting the deformity and reestablishing the morale in individuals who have received no encouragement and have given themselves up to lives of physical uselessness and mental depression.

The manipulation of cases of spine and hip joint disease is, of course, a measure which was used extensively in the early nineteenth century, only to decrease gradually in popularity until it was given up entirely. In most cases, the results were disastrous. Brodhurst, in 1857, described the methods used as early as 1839 in Paris by Louvrier, who had a machine for rupturing ankyloses, with fatal results. Since that time, I have been unable to find any record of cases treated by this method, and it has been the almost unanimous opinion that manipulation is not only without effect but is attended by great harm to the patient.

I believe, however, that the reason for failure of manipulative measures in the past has been their indiscriminate use. I accept absolutely the principle that it is useless and dangerous to attempt to rupture bony ankylosis, but I am confident that properly selected cases will demonstrate the value of manipulation, even though the deformities be persistent and progressive, so long as there is no evidence of osseous union by roentgenological examination. Other causes of kyphosis which contra-indicate manipulation are Pott's disease, syphilis, rickets, Kümmel's disease, malignancy, Scheuermann's disease (osteochondritis) and osteitis deformans. In the cases of Type 2 it may be a method of preventing ankylosis; but in all cases, even though bony union ultimately follows, ankylosis will be in a position which is less incapacitating to the patient and will consequently avoid the complete disability so commonly seen in advanced stages of the disease.

OPERATIVE TECHNIC

The patient is anesthetized, preferably with ether, and when entirely relaxed, he is turned on his abdomen. With an assistant holding each lower extremity up from the table, the operator manipulates the area of the spine showing the greatest deformity, usually the lower dorsal and lumbar region. During the manipulation there is usually a definite sound of the breaking up of fibrous adhesions. The pressure is continued over the deformity until the spine is slightly overcorrected. A plaster of Paris cast is then applied with the patient resting on hyperextension bars, the cast extending from the armpits down to the knees. The cast is allowed to remain on for ten days to two weeks, at the end of which time it is bivalved, and baking and massage instituted. As the patient grows stronger, he is allowed to be out of the cast for increasing intervals of time, and, when strong enough to stand, a brace is applied holding the back in the corrected position.

In some cases it may be necessary to manipulate the hips, provided there is no bony ankylosis. In one of my cases, an arthroplasty of one hip was performed following spinal manipulation.

SUMMARY

I have now done about twenty-five spinal manipulations on carefully selected cases with one death. The following deductions may be made:

1. In early cases of spondylitis, deformity may be prevented by ordinary measures of physiotherapy and support.
2. The majority of cases of spondylitis are permitted to advance to the stage of deformity.
3. In the stage of deformity, there is admittedly little hope for permanent cure of the disease.
4. It is therefore an orthopedic problem to cor-

rect the existing deformity and prevent its progress.

5. When the disease has advanced to the stage of bony union, corrective measures are injurious to the life of the patient.
6. If deformity without bony union is present correction may be obtained by forceful manipulation, and maintained by orthopedic appliances.
7. The operation is justifiable in that it not only makes the patient a more useful member of the community but also materially relieves the mental drudgery of his affliction.

SOME ORAL LESIONS REQUIRING SURGERY*

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Wilmington, Delaware

I have been invited to present a paper to this Society which will have a direct bearing on the interrelation of medicine and dentistry. In selecting my material, I have attempted to give you something to carry along with you in your daily practice. Theory is quite fine, and it would be relatively easy for me to discuss any number of technical subjects dealing with the more intricate lines of endeavor in the medico-dental world. We could argue the pros and cons from now on, perhaps, *ad infinitum*. But we are more interested in the problem which may be presented at some bedside or in the office tomorrow. I hope to give you some information along that line. Following this paper, a few lantern slides will demonstrate more specifically some of the conditions in the mouth which require surgical treatment.

I have purposely omitted diseases of the soft structures of the oral cavity. That subject is quite large enough to be discussed in a separate paper. I have also not included the larger neoplasms such as sarcoma and carcinoma. While they are included in the field of oral surgery, it is my opinion that they are best handled by the man who combines radium and xray treatment with his surgery. Early growths, perhaps, where no extensive ulceration of the tissue has taken place, may be treated successfully by electro-coagulation, but this subject has been discussed already this year before this Society.

I hope to demonstrate to you some evidences of oral abnormality, including infection, principally in the bony structures about the teeth, and in the teeth themselves. I will show you a group of cases in which there was systemic involvement. They have been selected because of that fact, and while it is impossible to go into the history of each, I ask you to believe me that there was some systemic disease. Almost all of these cases have been referred by physicians. There is a lot of talk about lack of co-operation between the medical and dental professions. I must say that I have not experienced that condition. Perhaps what many want to term a "lack of co-operation" is actually a lack of understanding. This paper is offered with the further hope, therefore, that we, in this locality, may have a better mutual understanding of our common field of service—the human body.

One of the greatest problems confronting us is that of retained roots and granulomata. It can safely be said that when the removal of one or more teeth is indicated, they should be removed completely. Pieces of root must not be left behind. If, in the removal of the tooth, fracture occurs, we have the xray apparatus to locate the remaining fragment and to check on our efforts to remove it. If on extraction, the granulomatous growth adheres to the tooth, it is accepted technique that no curettage is necessary. If it does not come away, then the curet must be used to remove it, an epethelial structure. If we do not remove it we shall probably find a large cyst in the area at a later date. This does not mean that curettage should be used indiscriminately. So-called "bone scraping" is indicated only when the bone is infected. Thus, when there is no sack, no granulomatous growth, and the radiograph has shown evidence of radiopacity, this is the diffuse type of infection, an early osteomyelitis. It should be curetted.

The most frequent foreign body seen in dental practice is a broken needle. I suppose many of you have hunted for a small foreign body in a finger, or a hand, and other parts of the body. You can appreciate, then, the problem of a broken needle. Bits of filling may get into an alveolus after an extraction and these pieces

*Read before the New Castle County Medical Society, Wilmington, April 19, 1932.

occasionally give trouble and have to be removed. By a series of radiographs they may be located and upon careful dissection, found and removed.

Cysts are not normal structures and should be removed. They may or may not be infected. Some of them contain sterile fluid. The larger percentage, however, occurring in the mouth do contain pus because they are remnants of an infected tooth and the toxins of the organisms present frequently play havoc with the human body. I should like to call your attention to a type of cyst occurring in the jaw which was described recently by Blum (1), at the International Dental Congress in Paris. He calls it a bone cyst. It occurs elsewhere in the body but has never been described before in the jaw. The cavity in the bone is filled with a gelatinous material but there is no lining membrane. We have one case to show.

The problem of impacted teeth is a great one. An impacted tooth is one which cannot erupt into normal position, either as a result of an obstruction or lack of physiological force. The two teeth in the mouth most frequently impacted are the third molars (wisdom teeth) and the upper cuspids (canines). If the tooth breaks through the tissue at any point, it becomes a breeding place for bacteria. Pockets form about it and necrosis of much of the surrounding bone follows. Flaps of tissue over third molars partially erupted, or, conversely, partially impacted, are one of the greatest predisposing causes of Vincent's disease, because they form a natural habitat for the causative organisms. Impacted teeth cause neurotic disturbances, obscure pains, neuralgias, arthritis, and many other types of pathology. This is true also of those which have never come through the gum, often spoken of as imbedded teeth. I have seen patients, who have worn plates for many years, hospitalized with some severe ailment which failed to respond to ordinary treatment. After these imbedded teeth have been discovered by radiograph and removed the patients got well. We shall see a few of the various types of impacted and imbedded teeth later.

The subject of osteomyelitis is huge. Perhaps we see more of it than anybody doing surgical work. Human resistance does more for us than we can possibly do ourselves. This type of inflammation is met by us, for the most part, in mild form, the post-extraction pain being the chief type. However, we often see it in extensive form, involving whole sides of a mandible or maxilla. It is interesting to note that such a condition frequently is a post-operative result in a patient with diabetes. Surgery of the mouth is just as contra-indicated in this disease as any other type of surgery. Where it must be carried out, oral surgery should be done only after hospitalization and diabetic treatment. The same routine is indicated as for any major operation, if more than one tooth is to be removed, with particular attention directed toward preventing alkaline deficiency. Infected deciduous teeth excellent predisposing causes of this condition in children. The bony structure is extremely porous, hence, ideal for the development of the infection.

It is a difficult matter to set down a hard and fast rule for the extraction of teeth infected with what is called pyorrhea. A better term is certainly rarefying pericementitis. It is a true rarefaction of the pericementum, the tissues around the teeth. Where pus is actually present and a half of the root is denuded of its membranes and bony surrounding tissues, we extract. Sometimes, during the systemic disease, we extract even though one-half has not been lost. I have seen patients showing no apical infection, reported to have no oral foci, who fail to get well. The removal of so-called pyorrhetic teeth produced the necessary remedial agent. There is just as much opportunity for toxin absorption from the crest of the alveolus as from the deeper structures. The vascular system extends everywhere and it is the system which takes up the toxins. We have slides of several advanced cases of this disease, showing what it does to the bony tissues.

Fractures of the jaw are best reduced by placing the teeth in normal occlusion. I wish to emphasize this point. By normal occlusion I mean that which is normal for the individual. There are many methods of wiring the mandible and maxilla together. The simplest is that advocated by Blair and Ivy. Looped wires are placed around the teeth and these loops are connected together with separate wires. I bring up this subject because it has surgical significance. If a tooth is in line of fracture it must be removed. The tissue will break down around

it and no callus will be formed. A slide will demonstrate that point. These cases may be treated with splints made of vulcanite, or by the use of silver wire to hold the fragments together. These occasions are rare and usually only indicated in edentulous mouths.

The dental and otolaryngological fields cross where the maxillary sinus is concerned. I feel that both have their places. If an antrum is involved as a direct result of a tooth infection, a tooth cyst, or a lost root, the treatment of the antral involvement certainly comes in the category of the oral surgeon. If the antrum is involved for any other reason, then it belongs in the other field. That draws a quite specific line. Nasal drainage, while perhaps necessary at times, following a tooth disturbance, should be handled by the nose and throat specialist; it is in his particular field. My experience has been that an antrum punctured accidentally or as the result of the removal of an infected tooth, cyst, or other growth, will give less trouble and heal quicker if it is left alone. Probing about, curetting, and washing excessively are contra-indicated in my opinion. Sinuses give enough trouble and a lot of extraneous matter introduced into these bony cavities predisposes to more serious complications. Occasionally we find cases where an infected tooth has broken the antral mucous membrane. I have one interesting case where a pyorrhea pocket extended into the antrum and produced a Bell's palsy. The condition subsided on removal of the tooth, washing of the sinus one time, and external massage. Infected teeth lying beneath the maxillary sinus frequently cause the characteristic signs of sinusitis, and in these cases must be removed before the sinusitis will subside.

A case of root-end resection is included in the slides to show you what it is and what it will do. The subject of non-vital (so-called dead teeth) has had a lot of attention. I feel that nearly every non-vital tooth is infected. However, others disagree. Patients do not like to part with them. Doubtless there are many of you here who have teeth from which the pulp has been removed. I follow this rule: If there is no systemic disease and the teeth are comfortable, leave them alone. If there is systemic disease, take them out. Now, if the tooth must be devitalized, the root canal can be filled, an opening made over the root-end, and the infected apex with its granuloma removed. Some cases are not successful. Many of them are for a number of years. It is just another way of managing these cases. You will see a slide of two of this procedure.

We frequently find cases in adults where no effort has been made to produce normal appearance and occlusion of the teeth, if malocclusion exists. This should be done in childhood by an orthodontist. Later, the patient realizes the poor appearance of the facial features. Occasionally we can help this by removing some teeth, considerable bone, and replacing the lost dental mechanism with artificial appliances. We have several cases showing this type of work. It is frequently necessary to resort to alveolectomy to produce satisfactory ridges for artifical dentures. It is a great aid to the dentist making the appliance. It is important to point out the increasing number of cases when readjustment of a mal-relation of the lower jaw with reference to its position in the temporo-mandibular articulation, is having great effect on the treatment of individuals suffering from speech defects, from the low-grade imbecile type to persons having auditory disturbances, which, in turn, affect their ability to reproduce sounds. This work is being done by Goodfriend and Twitmeyer, (*2*) in Philadelphia and has not as yet been published.

I have often been asked whether or not in the case of an acute abscess of a tooth, the tooth should be extracted. Many of us were taught, years ago, that the acute symptoms should be treated and then the tooth removed. We work along a different plan today. If you ran into an acute appendix, I doubt whether or not you would hesitate to operate. The only method to alleviate the condition and to save the life of the patient is to remove the infected organ. So, you see, there is no difference with a tooth. The same basic tissues are involved; the pathology is the same. The only precaution necessary to observe is that local anesthesia is contra-indicated, and nitrous oxide, ethylene, ethylchloride, or

ether are the anesthetics of choice. Quite certainly, the patient's general resistance must be kept in mind as an index to operation, the same as it is considered in abdominal surgery.

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Mail Order Urine Tests

Elsewhere in this issue appears a report from the Chemical Laboratory of the American Medical Association relative to a urine examining service conducted by Montgomery Ward and Company. Since the time when the Life Extension Institute first proposed by the examination of four specimens of urine each year to indicate to persons who submitted the specimens exact knowledge relative to their state of health, various concerns have endeavored to exploit this plan commercially. From time to time THE JOURNAL has published information relative to such agencies; many of them have come and gone during the last ten years. It is, however, a new departure for a mail order organization of the scope of Montgomery Ward and Company to undertake such a service, and it is sad indeed that the service once undertaken should be so unreliable as is the service they conduct. Every physician knows that a mere examination of the urine without a physical examination and without a careful study of the patient in person may be more misleading than valuable, so that even if the urine service were perfect, its utility would still be problematic. When, however, the service is of the character that this one seems to have, it becomes a menace to the user. It is difficult to surmise why Montgomery Ward and Company embarked on this jaunt into the field of medical practice. Since the article on the Universal Research Laboratories was prepared, evidence has become available that the company is actually owned by Warner's Renowned Remedies, a firm which manufactures a goiter remedy, and which deals largely with department stores and mail order houses. Certainly the ownership of the firm cannot improve its standing with the Chicago mail order house, nor can it be considered as in any way gilding this lily. It is to be hoped that this demonstration of the failure of the corporation to judge what is sound in the medical field will cause it once and for all to confine its business efforts to the sale of materials and goods rather than of medical service.—Editorial, *Jour. A. M. A.*, April 30, 1932.

Antitoxic Immunity Resulting From Administration of Toxin by Mouth

GEORGE F. DICK and GLADYS HENRY DICK, Chicago (*Journal A. M. A.*, April 23, 1932), report experiments that they made to learn whether or not ingestion of a sterile soluble toxin may stimulate the body to produce the corresponding antitoxin. Persons were selected who gave no history of an attack of scarlet fever and who were susceptible to the disease as shown by positive skin reactions following intradermal injection of one skin test dose of scarlet fever toxin. Sterile scarlet fever toxin from which the streptococci had been removed by filtration was administered by mouth in doses increasing from 4 cc. to 16 cc. of a toxin containing 50,000 skin test doses per cubic centimeter. Thus the amount of toxin administered in a single dose was increased from 200,000 to 800,000 skin test doses. The toxin was given once a day on successive days. It was taken without dilution and unaccompanied by water or other fluid at least two hours after the preceding meal and not less than one and a half hours before the next meal. After preliminary experiments to establish the harmlessness of the procedure, investigations were continued with the assistance of Dr. John Nichols, of Mooseheart, Ill. The degree of immunity resulting from administration of the toxin by mouth was determined by skin tests repeated from twelve to sixteen days after the first dose of toxin was given. It was found that the ingestion of sterile scarlet fever toxin may stimulate the body to produce the corresponding antitoxin in amounts sufficient to change a positive skin reaction to a negative reaction. The fact that when administered by mouth an average total dosage of 8,315,789 skin test doses of toxin immunized 73.1 per cent, while a total of 135,500 skin test doses injected subcutaneously immunized 93 per cent, indicates, however, that toxin administered by mouth is less efficient than the same toxin injected subcutaneously.

EDITORIAL

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DR. RAY LYMAN WILBUR AND THE COMMITTEE ON THE COST OF MEDICAL CARE

Under the general heading, "Medicine," the magazine *Time*, in the issue of March 28, 1932, gives considerable space to a statement by Dr. Ray Lyman Wilbur concerning the recommendations that are to be made by the Committee on the Cost of Medical Care some time next November.

The following paragraphs were in quotation marks:

"If we organize our talent for producing medical services economically and efficiently, we shall undoubtedly find that the cost is not too great for our present society. For inadequate medical services, produced with all the wastes inherent in the individualized practice, we now pay about $30 per capita annually. With organized, co-ordinated effort we should be able to provide ample medical services of good quality to all people, and with proper remuneration to the professional personnel, for costs of somewhere between $20 and $50 per capita per year.

"If all but the indigent can pay the price, we merely face the technical task of devising suitable methods of collecting the charges. On the other hand, if we find that there are substantial groups of our people who, though not indigent, nevertheless have so little surplus over the bare essentials of life that they cannot reasonably be expected to pay the cost of decent medical service, economically provided, we face a different and somewhat more vexing problem.

"If we expect charity to meet the cost, we are faced with the fact that charity, when obviously labeled as such, is distasteful to self-respecting people, and is too erratic and inadequate to meet such a large national problem.

"May we, in such cases, turn to the local, and perhaps the state, government and expect that it will meet a sufficient share of the cost to bring the charge to individual families within their reach? May we expect that local officials will agree that the protection of the people's health is as important, although not as costly, a social responsibility as the education of their minds? May we assume that methods can be worked out that will enable the local government to help carry the financial burden without placing the dead hand of official red tape or politics on scientific progress and skilled service?"

It will be observed that three of the four paragraphs quoted begin with "IF," and the fourth with "MAY WE." The last two sentences begin with "MAY WE EXPECT" and "MAY WE ASSUME." The last sentence states an assumption which has been misleading the public for some years. The assumption is that the government, local or national, can or will do things "without placing the *dead hand of official red tape or politics on scientific progress and skilled service.*" This is a rash assumption that makes null and void every conclusion *assumed* concerning the medical care of routine illnesses and injuries by means of governmental organization. Other statements in the article indicate that Secretary Wilbur himself knows better. Certainly a man in politics as prominently as he should know better.

In the second paragraph this sentence appears: "On the other hand, if we find there are substantial groups of our people who, though not indigent, nevertheless have so little surplus over the *bare essentials* of life that they cannot reasonably be expected to pay the cost of decent medical service, etc." A discussion of this paragraph involves, first, a definition of what constitutes a "bare essential of life." It is im-

plied that medical care is not a bare essential. If medical care is not one of the bare essentials, why is such a fuss made about it? If it is an essential, then we may discuss it along with other essentials of life.

Food, clothing, and shelter certainly may be regarded as bare essentials. Either or all of these three essentials may be supplied the public by communistic or governmental machinery more easily than medical care. Each of these three bare essentials have a definite bearing on the prevalence of illness and death. Illness is much less prevalent among people who have good food, good clothing, and good homes. It would, therefore, be better to apply communistic methods to fundamentals first if they are to be applied at all.

The quality of medical service any sick person receives is dependent very largely on one factor, and that factor is the ability and character of the doctor who has charge of the case. This is a fundamental fact lost sight of by most people who theorize on the subject of medical care. The ability and character of the doctor are not susceptible of standardization. Nor can these qualities be created or regulated by statute. Every doctor knows he would rather be treated, even operated on, if you please, in poor surroundings by some doctors than to have others treat him or operate on him in the best-equipped institution in the world. This rather strange statement is made to give emphasis to the fact that the character and the ability of the doctor in charge of a patient determine very largely the quality of medical care delivered. No sort of physical equipment, nothing can supplant this truth.

The standardization of education, including medical education, fails to produce a standardized product.

Two men born of the same parents, educated in the same institutions, may react quite differently to the actual problems of life. Human beings simply cannot be standardized. Certainly the qualities of services any graduate of medicine will deliver cannot be standardized.

The three bare essentials may all be carried in stock by a commissary operated by the state. A knocked-down house can be sold ready to be assembled. Food, such as meat and milk—in fact, all the necessities in the way of food—may be handled by the commissary. Clothing may be standardized in every way except a fit. It can be standardized as to color, weight, and quality. The little detail of fitting is a small matter of mechanical detail. All these supplies and services may be standardized. They do not require the *personal qualities* required to deliver medical care. One doesn't even have to know personally the man who delivers milk and meat. The quality of food, of clothing, and of shelter are independent of any personal quality. If these services are delivered by communistic methods at small cost, the people of moderate means would have the money with which to buy the type of medical care desired by them. The reverse, of course, is the recommendation implied in the article. It should be understood that we are opposed to communism at all. If communism is to be tried out in this country, it should be tried where it will bring the least disaster.

As to waste and inefficiency in medicine. There is some waste and inefficiency in medicine. There is far more waste and inefficiency in the production and delivery of the other essentials above referred to. For example, note the difference in the price of a few pounds of wool and the price of a suit of clothes. Think of the price of beef cattle and the price of meat at the meat market. Think of the price of corn and the price of cornmeal in the grocery store. Think of the cost of clay out of which bricks are made and the cost of houses. Yes, there is more waste in the manufacture and distribution of these other bare essentials than there is in the delivery of medical services under the system of individual practice.

So if America must adopt communism by degrees, it is much wiser that we begin the process on the *necessities*.

There are prominent doctors in America whose life work has been in connection with institutions. Their viewpoints are entirely institutional. They are quite ready to promulgate their theories on those whose life work is that of delivering medical service to sick people. The latter work in a quiet way. They shun publicity. The former group seems to have the ear of the public for the moment.

Organized medicine has contributed something to the present prominence of the chairman of the Committee on the Cost of Medical Care. Was an error made?—Editorial, *J. Tenn. S. M. A.*, April, 1932.

RESOLUTION TO BE SUBMITTED TO THE HOUSE OF DELEGATES, A. M. A.

Whereas, The present unrest is bringing forth an increasing discussion and demand for some form of Federal dole for relief of the indigent, and

Whereas, There is increasing agitation and solicitation that Federal and state governments provide a system of medical care for the people in some form or other similar to the British and French enactments, and

Whereas, Our only informative data emanate from outside organizations or individuals often biased or socialistically inclined, and

Whereas, The American Dental Association has through its own representatives investigated and compiled information and facts regarding the effects and results of doles and the British Panel System upon the practice of dentistry, therefore

Be It Resolved, That the delegates of the Michigan State Medical Society to the American Medical Association be and are hereby instructed to introduce the following resolution in the House of Delegates of the American Medical Association and to use their best efforts to secure its adoption;

Be It Resolved, That the Board of Trustees of the American Medical Association be requested to immediately institute a survey and compile facts upon the effect of doles and Federal health and sick benefit appropriations and administrations upon the practice of medicine in England and France and to compile a summary upon the effect such systems would have upon medical practice and scientific progress in the United States, and

Be It Resolved, That this information be made available to state medical societies.—*A. M. A. Bull.*

ANNOUNCEMENT

The Eighty-eighth Annual Meeting of the American Psychiatric Association will be held at the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, from May 30th to June 3rd, 1932, inclusive.

The daily sessions begin at 9.30 A. M.

WOMAN'S AUXILIARY

MRS. MILTON P. OVERHOLSER

National Chairman Committee of Press and Publicity, Harrisonville, Missouri

Regional press and publicity chairmen:

Eastern Region, Mrs. Leighton F. Appleman, 308 South Sixteenth Street, Philadelphia, Pa.

Central and Northern, Mrs. David S. Long, Harrisonville, Mo.

Southeast and Southern, Mrs. D. J. Williams, Gulfport, Miss.

Western, Mrs. George W. Miel, 420 E. Colfax, Denver, Col.

These chairmen are preparing Regional Scrap Books for the New Orleans Convention. These will contain exhibits of announcements and clippings from the various states concerning matters of Auxiliary interest, value and importance. There are outstanding accomplishments in each region. It is the hope that every woman attending the National Convention will find inspiration and pleasure in these Regional exhibits.

"The function of a medical auxiliary is to interpret the medical profession to the public." So Mrs. Walter Freeman, of Philadelphia, president-elect of the Auxiliary to the American Medical Association, told the Women's Auxiliary to the Omaha-Douglas County Medical Society, Tuesday, March 8, at a luncheon in her honor at the Fontenelle Hotel.

The daughter of a famed 95-year-old surgeon, author and editor, Dr. William Williams Keen, of Philadelphia, Mrs. Freeman is the widow of a physician and the mother of two. One son, Walter Freeman, is professor of neurology at George Washington University, Washington, D. C., and another is doing research work at Harvard.

The Kentucky Auxiliary Quarterly of April, 1932, is bigger and better than Volume I, No. 1, of January, 1932. This is the only state auxiliary publication in the country.

An editorial of nation-wide interest in this Quarterly relates to the establishment of the

Jane Todd Crawford Trail. This is Kentucky's first memorial to that heroic pioneer, and it leads the traveler as nearly as possible over the route she followed from her home near Greensburg to the home of Dr. Ephraim McDowell in Danville for the purpose of submitting her body to the great experiment. The Kentucky Highway Commission has graciously given permission to the Auxiliary to mark the road with proper signs and to plant trees and shrubs by the roadside.

MISCELLANEOUS

Addison's Disease Treated With Suprarenal Cortical Hormone (Swingle-Pfiffner)

During the past twenty months GEORGE A. HARROP, JR., and ALBERT WEINSTEIN, with the clinical assistance of ARTHUR MARLOW, Baltimore (*Journal A. M. A.*, April 30, 1932), have had under observation eight patients with Addison's disease, seven women and one man. Four of these patients have died. The other patients, at the present time, are living and are carrying on more or less restricted activities. All the patients are placed on subcutaneous injections of the cortical extract. Twice a day, a dose of 1 or 2 cc. is given, depending on the apparent severity of the case and the clinical effect. It is possible that certain severe cases will require more. The injections are usually made by the patients themselves, similar to the manner in which insulin is used by diabetic patients. Intravenous injections have been frequently resorted to in an emergency. These have been avoided in general because of the possible excretion of the hormone through the urine, thus resulting in some loss of effect. The material is painless when injected and appears to keep its potency for a period of at least two or three weeks without preservatives. It is kept on ice in the dark, being warmed up only for the injections. Certain general principles in the management of the patient should not be neglected. The patient should be warned against undue physical exertion and on the necessity of proper periods of rest and the avoidance of infections. The constantly recurring anorexia makes the dietary problem a serious one. During relapses it is of importance to administer the cortical hormone in large doses as early as possible. As much as 30 cc. has been administered intravenously at a dose, but such large amounts are rarely needed. These relapses often come on insidiously, and due heed must be paid to complaints of weakness, anorexia or nausea. There is no effect within several hours on any of the commonly studied chemical constituents of the blood, including the serum base, lactic acid or potassium, after injection of the cortical extract, either in normal persons or in patients with Addison's disease. Together with the use of the extract carbohydrates should be given by mouth in as large amounts as may be tolerated, and use should be made of dextrose and salt infusions subcutaneously or intravenously when indicated. Such infusions of fluid by vein must be given slowly and with great care. Hypoglycemia should be vigorously combated, and frequent blood sugar studies are advisable to control the efficacy of treatment. The authors have recently used continuous intravenous dextrose injection, by the technic of Warthen, with success in the treatment of an abrupt and severe relapse. By this method, not only is a continuous supply of dextrose furnished and hypoglycemia absolutely prevented, but a free excretion of urine occurs at all times. Drugs, such as epinephrine or pituitary solution (ampules of pitressin), for raising the blood pressure may also be given in minute constant amounts in the injection fluid. Their efficacy has not yet been demonstrated. Just as in the case of the experimental animal, these patients are apt to become very cold and require external warmth. All the various suprarenal gland preparations are essentially useless, and large injections of epinephrine should be avoided except in definite circulatory collapse and as an emergency measure only. When administered by mouth in many patients, epinephrine tends to aggravate nausea, if this is already present.

Lesions of the Cardiac Orifice of the Stomach Produced by Vomiting

SOMA WEISS and G. KENNETH MALLORY, Boston (*Journal A. M. A.*, April 16, 1932), report two cases of laceration and ulceration at the junction of the esophagus and the stomach which resulted fatally. In the first case the characteristic longitudinal laceration of the mucosa was acute and unusually deep, rupturing a visible artery and causing death from exsanguination. In the second case the clinical evidence suggest-

ed that an acute laceration which had developed in the past had caused the formation of a chronic ulcer at the junction of the esophagus and the stomach. This ulcer, following an alcoholic debauch and vomiting, ruptured and perforated into the mediastinum, causing bilateral purulent empyema and subcutaneous emphysema. The concept of the mechanism involved in the development of lesions at the cardiac orifice of the stomach described in a previous communication is supported by the clinical course and postmortem observations now reported. Pressure changes in the stomach during disturbed mechanisms of vomiting, together with regurgitation of the gastric juice and the corrosive effect of alcohol, are considered to be responsible for the origin of the lesions described.

Physical Characteristics of High Frequency Current

ALLAN HEMINGWAY and W. K. STENSTROM, Minneapolis (*Journal A. M. A.*, April 23, 1932), emphasize the fact that the small amount of physical knowledge acquired as a premedical student is likely to be temporarily forgotten under the overwhelming load of anatomy, chemistry, physiology and so on. It is for this reason that they commence their paper with a brief review of some of the fundamental principles of electricity that are applicable to the action of high frequency. They then give a detailed discussion of the applications of physical and chemical theory in diathermy and the methods and clinical use of short wave therapy (radiotherapy).